

REMARKS

Claims 1-26 are pending in the application.

Claims 1-26 are rejected.

Applicant respectfully thanks The Examiner for acknowledging claim for foreign priority under 35 U.S.C. § 119 (a)–(d).

Applicant respectfully thanks The Examiner for acknowledging the election of group I in Paper No. 4.

Claims 1, 10, 12, 14, 15, 22 and 25 are amended. Support for limitations can be found in, for example, FIGS. 2-4 and the accompanying text.

No new matter is added.

Claims 1-26 remain in the case for consideration.

Applicant requests reconsideration and allowance of the claims in light of the above amendments and following remarks.

Claim Rejections – 35 U.S.C. § 103

Claims 1, 3-4, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,994,201 issued to Lee (“Lee”) in view of U.S. Patent No. 6,231,673 issued to Maeda (“Maeda”).

Claims 2, 5 and 6 are rejected under 36 U.S.C. 103(a) as being unpatentable over Lee in view of Maeda, and further in view of U.S. Patent No. 4,804,633 issued to Macelwee et al. (“Macelwee”).

Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Maeda in view of Macelwee, and further in view of U.S. Patent No. 6,150,235 issued to Doong et al. (“Doong”).

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Maeda in view of Macelwee, and further in view of U.S. Patent No. 5,923,998 issued to Liu (“Liu”).

Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee, Maeda, Macelwee in view of Liu, and further in view of Doong.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee, Maeda, Macelwee, Liu, U.S. Patent No 6,180,493 issued to Chu (“Chu”) in view of U.S. Patent No. 6,140,208 issued to Agahi et al. (“Agahi”), and further in view of U.S. Patent No. 5,665,633 issued to Meyer (“Meyer”).

Claims 15, 18, 19, 22-23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in view of Maeda.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in view of Maeda, and further in view of Macelwee.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in view of Maeda, and further in view of U.S. Patent No. 6,174,785 issued to Parekh et al. ("Parekh").

Claims 20, 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chu and Maeda in view of Macelwee, and further in view of Doong.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu and Maeda in view of Macelwee, and further in view of Parekh.

The rejections are respectfully traversed.

Claim 1 is amended to recite,

"A method for forming an oxide layer having a first thickness in an integrated circuit device process, comprising:

growing a thermal oxide layer having a second thickness thinner than the first thickness on a surface of a semiconductor substrate in a chemical vapor deposition(CVD) apparatus; and

forming a CVD material layer having a third thickness substantially equal to a difference between the first thickness and the second thickness on the thermal oxide layer in the CVD apparatus." (Emphasis added)

None of the cited references, either alone or in combination, teach or suggest the above limitations of claim 1. For example, Maeda merely teaches that the apparatus can be configured as a heat treatment system available for processing such as heat treatment, thermal oxidation, and CVD processing. See col. 15, lines 50-55 of Maeda. Applicants believe that nothing here teaches or suggests that the thermal oxidation and chemical vapor deposition (CVD) are performed in the *same* apparatus, not to mention "forming a CVD material layer having a third thickness substantially equal to a difference between the first thickness and the second thickness," as recited in amended claim 1.

Accordingly, the rejection does not present a *prima facie* case of obviousness. Therefore, claim 1 is allowable and claims 2-11, which depend therefrom and recite features that are neither taught nor disclosed in the cited references, are also allowable.

Claims 12, 15 and 22 are also allowable, at least for the above reasons discussed above. Also, claims 13-14, which depend from claim 12, and claims 16-22, which depend

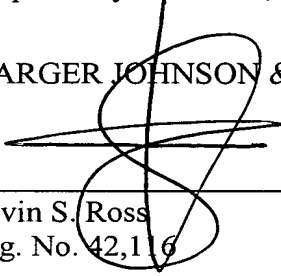
from claim 15, and claims 24-26, which depend from claims 22, are also allowable for their dependency and their own merits. For example, none of the cited references teach or suggest, “forming an oxide layer of a *double layer structure* with a first thickness on a surface of the trench [by]...forming a thermal oxide layer having a second thickness on the trench and forming a conformal liner material layer having a third thickness substantially equal to a difference between the first thickness and the second thickness on the oxide layer... wherein the thermal oxide layer, the conformal liner material layer, and the nitride liner layer, and the trench isolation layer are formed in the *same* chemical vapor deposition (CVD) apparatus,” as recited in claim 22. (Emphasis added) As discussed above, applicants respectfully submit that mere suggestion that the apparatus can be configured as a heat treatment system for processing different processes is not sufficient to teach the above limitations of claim 22.

CONCLUSION

For the foregoing reasons, reconsideration and allowance of claims 1-26 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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